

Letter from Mauro, Cameron, Lewis & Massie to Alexander Graham Bell, October 31, 1911

S. T. CAMERON. 11/9/11 LAW OFFICES TELEPHONE Washington, Main 3461. REEVE LEWIS. OF New York, 5251 Beekman. C. A. L. MASSIE. **MAURO, CAMERON, LEWIS & MASSIE**, CABLE ADDRESS: Mauro—Washington. Phimauro—New York. Patents and Patent Causes, F. A. HOLTON. W. B. KERKAM. 700 TENTH ST., N. W., WASHINGTON, D. C. CODES USED: Liebers. Western Union. Marconi. RALPH L. SCOTT. (TRIBUNE BLDG., 154 NASSAU ST., NEW YORK.) NOTE THE ADDRESS **WASHINGTON**, October 31st, 1911. 700 TENTH ST., N. W. Dr. Alexander Graham Bell, Beinn Bhreagh, Near Baddeck, Victoria County, Nova Scotia, Canada. Dear Dr. Bell:—

Baldwin — Serial No. 485,281, Filed March 23, 1909.

We take pleasure in advising you that this application was allowed under date of October 10th, 1911. The final Government fee may be paid any time on or before April 10th, 1912.

Bell, Curtiss, Baldwin, McCurdy and Selfridge — Serial No. 488, 779, Filed April 8, 1909.

We take pleasure in advising you that this application was allowed under date of October 28th, 1911. The final Government fee may be paid any time on or before April 28th, 1912.

For your information, we enclose herewith copy of the claims allowed in each of the above indicated applications. In view of the activity in this art, we suggest that the final Government fees be promptly paid.

Bell — Serial No. 542,679, Filed Feb. 8, 1910.

The protracted prosecution of this application was recently concluded and the Examiner indicated that the claims were allowable. He, however, stated that certain of the claims

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had been suggested to other parties for purposes of interference and we are, accordingly, expecting to receive the official declaration of the interference in the near future. We also enclose herewith copy of the claims which the Examiner has allowed.

Yours sincerely, Mauro Cameron Lewis & Massie K/W Enclosures: (3) Per ?BM.

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In Re Application of Alexander Graham Bell, Filed Feb. 8th, 1910, Serial No. 542, 679.:
FLYING MACHINES.

COPY OF ALLOWED CLAIMS.

1. In a flying machine, the combination of a supporting surface, and unitary means for balancing said machine pivoted above said supporting surface in a plane normal thereto along the medial fore and aft line of said surface and at approximately its center of pressure.
2. In a flying machine, the combination of a supporting surface, and an unitary device for balancing said machine turning on an axis normal to said supporting surface at approximately its center of pressure.
3. In a flying machine, the combination of a supporting surface, with an unitary balancing device turning on an axis normal to the medial fore and aft line of said supporting surface at approximately its center of pressure, and means for turning said device about said axis.
4. In a flying machine, the combination of a supporting surface, and unitary means for balancing said machine turning on an axis normal to said supporting surface at approximately its center of pressure, and means for turning said balancing means about said axis.
5. In a flying machine, the combination of propeling means, a supporting surface, a steering rudder, an elevating and depressing rudder, and an unitary balancing device

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turning on an axis normal to said supporting surface at approximately its center of pressure.

6. In a flying machine, the combination of a supporting surface, with an unitary balancing rudder or device lying in a plane passing through the medial fore and aft line of said surface at approximately the center of pressure of the machine, which plane is vertical when the machine is balanced laterally, and means operative by the aviator for turning said rudder or device on an axis within said plane.

7. In a flying machine, the combination of a propeling means, a supporting surface, a steering rudder and an elevating and depressing rudder, one of said rudders being at the front and the other at the rear, with an unitary balancing rudder or device located between said first-named rudders, in a plane normal to the medial fore and aft line of said supporting surface and at approximately the center of pressure of the machine.

8. In a flying machine, the combination of a propeling means, a supporting surface, an unitary balancing rudder or device above said surface in a plane that is vertical when said surface is in a state of lateral balance and at approximately the center of pressure of the machine, and means under control of the aviator for turning said rudder or device about its axis to restore or maintain the lateral balance of the machine.

In re Application of Frederick W. Baldwin, Filed March 23, 1909, Serial No. 485,281.:
FLYING MACHINES.

COPY OF ALLOWED CLAIMS.

1. In a flying machine, the combination of a plurality of separate independent concavo-convex supporting surfaces united with their concave sides towards each other, each of said supporting surfaces having its greatest depth from front to rear at its central portion and having a gradually decreasing depth from front to rear from said central portion to its lateral marginal lines

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2. In a flying machine, the combination of a pair of superposed supporting surfaces spaced farthest apart at their central portion and gradually approaching each other toward their lateral edge portions, a series of spacing struts arranged in a line extending from one lateral edge of the structure to the other, and a chord or truss-wire extending in a straight line from the outer strut on one side of the structure to the outer strut on the other side and secured to each of said series of struts.
3. In a flying machine, the combination of a plurality of separate independent concavo-convex supporting surfaces having their concave sides toward each other, a front and a rear series of struts, each strut extending from one supporting surface to the other, with a front and a rear chord or truss-wire extending across the concave side of each supporting surface.
4. In a flying machine, the combination of a plurality of concavo-convex supporting surfaces having their concave surfaces toward each other, a front and a rear series of struts, each strut extending from one supporting surface to the other, with a front and a rear chord or truss-wire extending across the concave side of each supporting surface and secured to said struts.
5. In a flying machine, the combination of a plurality of separate independent superposed concavo-convex supporting surfaces having their concave sides towards each other and each having a depth from front to rear gradually decreasing from the center to the lateral margins, a series of vertical struts separating said supporting surfaces, and diagonal truss members extending from the top of each strut to the bottoms of the adjacent struts on each side thereof.
6. In a flying machine, the combination of a plurality of superposed concavo-convex supporting surfaces having their concave sides towards each other, a series or vertical struts separating said supporting surfaces, diagonal truss members extending from the top of each strut to the bottoms of the adjacent struts on each side thereof, and a chord or

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truss-wire extending across the concave side of each supporting surface in the line of said series of struts and secured to each strut.

7. In a flying machine, the combination of a plurality of separate independent concavo-convex supporting surfaces having their concave sides towards each other, a front and a rear series of struts gradually decreasing in length from the center to the lateral margins of said surfaces, said struts extending from one supporting surface to the other, a diagonal truss member extending from the top of each strut to the bottom of each adjacent strut in the series, and a truss member extending from the top of each strut of one series to the bottom of the opposite strut in the other series.

8. In a flying machine, the combination of a plurality of concavo-convex supporting surfaces having their concave sides towards each other, a front and a rear series of struts, said struts extending from one supporting surface to the other, a diagonal truss member extending from the top of each strut to the bottom of each adjacent strut in the series, a truss member extending from the top of each strut of one series to the bottom of the opposite strut in the other series, and a front and a rear chord or truss-wire, each extending across the concave side of each supporting surface in the line of the series of struts and secured to each strut of the series.

9. In a flying machine, the combination of a plurality of concavo-convex supporting surfaces having their concave sides towards each other, with a series of struts separating the surfaces, a chord or truss-wire extending across the concave side of each supporting surface and secured to the struts, and means for adjusting the length of said chord or truss-wire between the struts.

10. In a flying machine, two superposed supporting surfaces each of said surfaces having frames formed in a series of sections which abut each other, struts separating said frames and abutting the laterally-extending portions thereof, and truss-members uniting the whole into a rigid structure.

11. In a flying machine, two superposed supporting surfaces each of said surfaces having frames formed in a series of sections which abut each other, struts separating said supporting surfaces and abutting the laterally-extending portions of the two frames, and adjustable truss-members uniting the whole into a rigid structure.

12. In a flying machine, a pair of separate independent concavo-convex supporting surfaces superposed one above the other with their concave sides toward each other, struts separating the supporting surfaces and abutting the framework thereof, and adjustable truss members uniting the whole into a rigid unyielding structure.

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In Re Application of Alexander Graham Bell, Glenn H. Curtis, Frederick W. Baldwin, J. A. Douglas McCurdy and Thomas E. Selfridge (Deceased), Filed April 8th, 1909, Serial No. 488,779.: FLYING MACHINES.

COPY OF ALLOWED CLAIMS.

1. In a flying machine, the combination of a supporting surface having a positive angle of incidence, a pair of lateral balancing rudders, one on each side of the medial fore and aft line of the structure and each of said rudders normally having a zero angle of incidence and connections between said rudders.

2. In a flying machine, the combination of a supporting surface having a positive angle of incidence, a pair of lateral balancing rudders, one on each side of the medial fore and aft line of the structure, and each of said rudders normally having a zero angle of incidence, and connections between said rudders, whereby one is adjusted to a positive and the other to a negative angle of incidence.

3. In a flying machine, the combination of a supporting surface having a positive angle of incidence, a pair of lateral balancing rudders, one on each side of the medial fore and aft line of the structure, and each of said rudders normally having a zero angle of incidence,

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and means for simultaneously adjusting said rudders, the one to a positive and the other to a negative angle of incidence.

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4. In a flying machine, the combination of a pair of suitably spaced supporting surfaces having a positive angle of incidence, means uniting said supporting surfaces, and a pair of horizontal balancing rudders normally having a zero angle of incidence and arranged one on each side of the medial fore and aft line of the structure, and connections between said rudders.

5. In a flying machine, the combination of a pair of suitably spaced supporting surfaces having a positive angle of incidence, means uniting said supporting surfaces, a pair of horizontal balancing rudders normally having a zero angle of incidence and arranged one on each side of the medial fore and aft line of the structure, and connections between said rudders whereby one is adjusted to a positive and the other to a negative angle of incidence.

6. In a flying machine, the combination of a supporting surface having a positive angle of incidence, a pair of lateral balancing rudders, one arranged on either side of the medial fore and aft line of the machine, means normally supporting said lateral balancing rudders at a zero angle of incidence, and means operating to shift said balancing rudders to equal and opposite angles of incidence.

7. In a flying machine, the combination of a supporting surface having a positive angle of incidence, a pair of lateral balancing rudders, one arranged on either side of the medial fore and aft line of the machine, means normally supporting said lateral balancing rudders at a zero angle of incidence, and means operating to simultaneously shift said balancing rudders to equal and opposite angles of incidence.

8. In a flying machine, the combination of a supporting surface having a positive angle of incidence, a pair 3 of lateral balancing rudders, one arranged on either side of the medial

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fore and aft line of the machine, connections between said balancing rudders, means normally supporting said lateral rudders at a zero angle of incidence, and means operating to shift said balancing rudders to equal and opposite angles of incidence.

9. In a flying machine, the combination of a plurality of supporting surfaces having a positive angle of incidence, means uniting said supporting surfaces, and a pair of horizontal balancing rudders, one on each side of the medial fore and aft line of the structure and each mounted outside of the lateral marginal extremities of said supporting surfaces and having normally a zero angle of incidence.

10. In a flying machine, the combination of a pair of suitably spaced supporting surfaces having a positive angle of incidence, means uniting said supporting surfaces, and a pair of horizontal balancing rudders normally having a zero angle of incidence, one on each side of the medial fore and aft line of the structure, and each of said rudders being mounted outside of the lateral marginal lines of said supporting surfaces and on an axis transverse to the line of flight.

11. In a flying machine, the combination of a pair of suitably spaced supporting surfaces having a positive angle of incidence, means uniting said supporting surfaces, a lateral balancing rudder normally having a zero angle of incidence and mounted on an axis transverse to the line of flight on each side of the medial fore and aft line of the structure, and means inclining the said rudder on one side of the structure at a positive angle of incidence and the rudder on the opposite side of the structure at a negative angle of incidence.

12. In a flying machine, the combination of a plurality of suitably spaced supporting surfaces having a positive angle of incidence, means uniting said supporting surfaces, a pair of lateral balancing rudders, one on each side of the medial fore and aft line of the structure, and each of said rudders normally having a zero angle of incidence, and a single controlling lever operatively connected to both of said rudders.

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13. In a flying machine, the combination of a plurality of suitably spaced supporting surfaces having a positive angle of incidence, means uniting said supporting surfaces, a pair of lateral balancing rudders, one on each side of the medial fore and aft line of the structure and outside of the marginal extremities of said supporting surfaces and each of said rudders normally having a zero angle of incidence, and a single controlling lever operatively connected to both of said rudders.

14. In a flying machine, the combination of a plurality of suitably spaced supporting surfaces having a positive angle of incidence, means uniting said supporting surfaces, a pair of lateral balancing rudders, one on each side of the medial fore and aft line of the structure and each of said rudders normally having a zero angle of incidence, and a single controlling lever operatively connected to both of said rudders and having a part in operative relation with the person of the aviator.

15. In a flying machine, the combination of a plurality of suitably spaced supporting surfaces, having a positive angle of incidence, means uniting said supporting surfaces, a pair of lateral balancing rudders, one on each side of the medial fore and aft line of the structure and outside of the marginal extremities of said supporting surfaces and each of said rudders normally having a zero angle of incidence, and a single controlling lever operatively connected to both of said rudders and having a part in operative relation with the person of the aviator.

16. In a flying machine, the combination of a plurality of suitably spaced supporting surfaces having a positive angle of incidence, means uniting said supporting surfaces, a pair of lateral balancing rudders, one on each side of the medial fore and aft line of the structure and each of said rudders normally having a zero angle of incidence, and a controlling lever operatively connected to both of said rudders and having a part embracing the body of the aviator.

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17. In a flying machine, the combination of a plurality of suitably spaced supporting surfaces having a positive angle of incidence, means uniting said supporting surfaces, a pair of lateral balancing rudders, one on each side of the medial fore and aft line of the structure and outside of the marginal extremities of said supporting surfaces, and each of said rudders normally having a zero angle of incidence, and a controlling lever operatively connected to both of said rudders and having a part embracing the body of the aviator.

18. In a flying machine, the combination of a plurality of suitably spaced supporting surfaces having a positive angle of incidence, a member projecting outside of the lateral marginal line of said surfaces, a rudder fulcrumed to each of said projecting members and normally having a zero angle of incidence, and means for operating said rudders.

19. In a flying machine, the combination of a pair of superposed supporting surfaces having a positive angle of incidence, means uniting said supporting surfaces into a rigid non-flexing structure, a pair of lateral balancing rudders normally having a zero angle of incidence and one on each side of the medial fore and aft line of the structure, means connecting said rudders together whereby a movement of one imparts a reverse movement to the other, and operating means connected to both of said rudders.

20. In a flying machine, the combination of a pair of superposed supporting surfaces having a positive angle of incidence, means uniting said supporting surfaces into a rigid non-flexing structure, a pair of lateral balancing rudders normally having a zero angle of incidence, one on each side of the medial fore and aft line of the structure and outside of the marginal extremities of said supporting surfaces, means connecting said rudders together whereby a movement of one imparts a reverse movement to the other, and operating means connected to both of said rudders.

21. In a flying machine, the combination of a pair of suitably spaced supporting surfaces having a positive angle of incidence and means uniting the same, a pair of lateral balancing rudders normally having a zero angle of incidence, one on each side of the

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medial fore and aft line of the structure, means for operating said lateral rudders, an elevating and depressing device, and means for operating said device.

22. In a flying machine, the combination of a supporting surface, a pair of lateral balancing rudders, one on each side of the medial fore and aft line of the structure, an elevating and depressing device, a steering rudder, a shaft mounted to move longitudinally and operatively connected to said elevating and depressing device, a member mounted on said shaft and connected to said steering rudder, and means for operating said balancing rudders.

23. In a flying machine, the combination of a chassis mounted on wheels one of which is a steering wheel, an aerodrome mounted on said chassis, a steering rudder, an elevating and depressing device, a longitudinally movable shaft, a steering element mounted on said shaft and means operatively connecting said element to said steering rudder and steering wheel, and operative connections between said shaft and said elevating and depressing device.

24. In a flying machine, the combination of an aerodrome having a positive angle of incidence and two lateral balancing rudders normally having a zero angle of incidence, one on each side of the medial fore and aft line of the machine and pivotally supported on the outside of the lateral marginal lines thereof, and means automatically operated by the body movements of aviator and operatively connected to said balancing rudders.

25. In a flying machine, the combination of a pair of superposed supporting surfaces having a positive angle of incidence, means uniting said supporting surfaces into a rigid non-flexing structure, a lateral balancing rudder normally having a zero angle of incidence on each side of the medial fore and aft line of the structure and mounted to turn on an axis substantially parallel to the longitudinal axis of the machine, and means connecting said rudders whereby a movement of one imparts a reverse movement to the other, and operating means connected to both of said rudders.

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26. In a flying machine, the combination of a plurality of suitably spaced supporting surfaces having a positive angle of incidence, a member projecting outside of the lateral marginal extremities of each of said surfaces and in line with the front marginal edge thereof, a rudder fulcrumed to each of said projecting members, and means for operating said rudders.

27. In a flying machine, the combination of a plurality of suitably spaced supporting surfaces having a positive angle of incidence, means uniting said supporting surfaces, a pair of lateral balancing rudders, one on each side of the medial fore and aft line of the structure, and each of said rudders normally having a zero angle of incidence, and connections between said rudders whereby one is adjusted to a positive and the other to a negative angle of incidence.

28. In a flying machine, the combination of a plurality of suitably spaced supporting surfaces having a positive angle of incidence, means uniting said supporting surfaces, a pair of lateral balancing rudders, one on each side of the medial fore and aft line of the structure, and each of said rudders normally having a zero angle of incidence, and means for simultaneously adjusting said rudders the one to a positive and the other to a negative angle of incidence.